

Constant feed fertigation

Specification of particular brand names below does not imply an endorsement by USDA that they are necessarily superior to other comparable products

Medium:

Use e.g., **Promix® BX Mycorrhizae:** (60 lb. = 27kg bale) mixed with 3.125 cups = 750g Osmocote^{Plus}® 5-6M (15-9-12 NPK) with micronutrients and ~15 L tap water. We use the custom-built tumbler shown (plans available from the genebank).



Fertigation:

For vegetative multiplication of tubers in long-day adapted cultivated germplasm, extra fertilizer applied as fertigation is not required and may delay maturity and tuberization.

For sexual multiplication for botanical seeds, extra fertilizer beyond that which apparently supports robust plant growth has been demonstrated to double fruit and seed production¹.

Use e.g., Plant Marvel® “Nutriculture Spoon-Feeding Soluble Fertilizer” (20-20-20 NPK) plus trace minerals at 3 Tbs per gallon water = 0.5g / L as the concentrate diluted 17:1 siphoned from buckets servicing each individual water hose, e.g. with Dramm Siphonject® Siphon Mixer or a concentrate mix of 35 oz per 5 gal water (52g/L) for a solid set injector system servicing the whole greenhouse complex, e.g. Smith Measuremix® Model R-4.



All irrigation may be done as fertigation without any periodic flushing. Custom hand water each pot in the morning just enough for the plant's use that day.

Avoid splashing on foliage.

For best growth and flowering, provide an environment with low humidity, plenty of light (intensity and daylength), and avoid temperature spikes and overwatering.

¹ Bamberg, Fernandez and del Rio. 2017. Extra soil fertilization of mother plants increases botanical seed yield but not long-term germination in wild *Solanum* (potato). *American Journal of Potato Research* 94:in press).